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CO-OPERATION IN PUBLIC HEALTH ADMINISTRATION WITH THE MEDICAL PROFESSION AND THE PUBLIC*

BY

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The aim we all have in view is the highest efficiency of health services for the welfare of the community. The social and health welfare services have been newly created during the last thirty years and have developed to such a great extent that their perfection and utilization to the best public advantage can only be obtained by co-operation. By co-operation I mean sympathy, understanding, and mutual help by all concerned, so that the maximum benefit is obtained from this elaborate system of health services.

It is important to remember that the public has played a great part in the inauguration of these health services of the nation. For example, the first fever hospital in London was instituted by the citizens of London, who met together in 1801 and by public subscription brought into existence the London Fever Hospital in 1802. As the result of the labours of a band of pioneers, chief among whom was Sir Edwin Chadwick, who was not a member of the medical profession, an earnest endeavour was made to improve the appalling sanitary and health conditions of those times. The fruition of their labours was the passing of the first Public Health Act in 1848, only ninety years ago, and the creation of the first General Board of Health, the two permanent officials of which were Sir Edwin Chadwick and a medical representative, Dr. Southward Smith, a physician to the London Fever Hospital.

It is well to remember how comparatively recent has been the introduction of public health administration and the development of a national health consciousness. In 1871 the Local Government Board was established, and this was followed by the great Public Health Act of 1875, which consolidated the many sanitary laws of the time and placed on a sound basis the public health medical and sanitary services of this country.

The Establishment of the Ministry of Health

The establishment of the Ministry of Health in 1919 was one of the greatest events in the advancement of the public health of recent times. This department of national service was given a position of dignity and prestige in the State administration which it well deserved and which it had earned by years of devoted and self-sacrificing work. Under the aegis of the Ministry of Health a well-organized system of co-ordination of the health authorities has developed throughout the country. The public health medical service has the great advantage of the supervision and interest of a central controlling authority, whereby a high standard of efficiency is ensured, and by which, also, the conditions of appointment of medical officers of health are safeguarded.

It may safely be said that the public health medical service of this country is the most efficient in the world, and the national social and health services are unequalled. Let us remember that this high standard could not have been attained but for the enthusiasm, co-operation, and desire for progress of the British public.

* Read in opening a discussion in the Section of Medical Sociology at the Annual Meeting of the British Medical Association, Plymouth, 1938.

Recent Developments

In 1911 I read a paper before the Medical Society of St. Mary's Hospital entitled "Some Public Aspects of Medicine." At that time the medical officer of health was chiefly concerned with sanitation, housing, water supply, food supervision, fever hospital administration, and so on. The clinical services were in their infancy. A few of the boroughs of London had established infant welfare centres. The school medical services were scarcely developed. The first tuberculosis dispensary in England was started in Paddington in 1910 by voluntary effort, following the example of Scotland, where, two or three years before, a tuberculosis dispensary had been inaugurated by Sir Robert Philip in Edinburgh.

Since 1911 there has been enormous development of what may be termed the "clinical services." This development has been brought about by the progressive action of the municipal and county authorities, who, be it remembered, are the elected representatives of the public.

The medical profession has played a great part in this education of the public in health matters, and is in that way responsible for the great progress and high degree of efficiency of the health services to-day.

It will here be expedient to mention some of the clinical services provided by the health authorities in this country.

Infant and child welfare clinics.

The *maternity welfare services,* which include ante-natal and post-natal clinics. In London these have reached a high degree of perfection, and include a domiciliary *midwife service* which has been established by the London County Council.

The *school medical services,* in addition to the general supervision of the health of school children, provide special services for the expert treatment of throat, eye, dental, and orthopaedic affections.

Tuberculosis is dealt with by tuberculosis dispensaries, by provision of facilities for early diagnosis, which should include *x*-ray examination of contacts. Sanatorium treatment of early cases is provided by the council authorities, who also make provision for hospital segregation and treatment of advanced and incurable cases.

Venereal diseases are wisely dealt with by clinics, where the most modern treatment can be obtained.

Orthopaedic clinics and special hospitals.

Fracture clinics.

Rheumatism.—Juvenile rheumatism is dealt with by special clinics and by the provision of hospitals for the treatment of cases with cardiac affections, notably in London and Birmingham.

Chronic rheumatism is receiving special attention by the provision of clinics and hospital and spa treatment, a great impetus to this development being given by the work of the Empire Rheumatism Council.

Mental diseases.—Clinics for early diagnosis and treatment, anid provision of hospital treatment.

Vaccination clinics.

Immunization clinics for protection against diphtheria are being provided by the municipal authorities, who are encouraging the public to take advantage of this valuable prophylactic measure to reduce the case incidence of this all-too-prevalent disease.

Laboratory pathological services are provided by the health authorities throughout the country, and these are available to medical practitioners for facilitating accurate diagnosis in any cases under their care.

Position of the M.O.H.

The above review of health services indicates their wide variety and the need for co-operation.

The medical officers of health are men highly trained in preventive medicine, and many of them have had wide clinical experience. Medicine has become so vast in its many branches that no man can be an expert in all. The medical officer of health must be supreme, but he needs the close co-operation not only of specialist experts but of the general practitioners of his district. Much of the special clinical and hospital service must be delegated to specially appointed experts. The medical officer of health is the medical representative of his health authority—that is, the public—and the link with the medical practitioners who are carrying on the many clinical services in his area.

It must be remembered that the medical officer of health is not a free-lance. He must carry out the wishes of the authority by whom he is appointed, subject of course to the supervision and protection of the Ministry of Health. Co-operation would be greatly facilitated by the appointment of a Consultative Medical Advisory Committee composed of representatives of the medical practitioners of the district, with the medical officer of health as chairman. This committee would be small and would meet at fixed periods—not too frequently, perhaps—when any medical problems or difficulties might be discussed. There should be provision for the medical officer of health to call a meeting at any time, particularly in periods of stress. On the other hand the committee might invite the medical officer of health to call a meeting if any matter of pressing importance required consideration. The committee might well be wholly or partly nominated by the council of the local B.M.A. Branch.

The then Minister of Health, Sir Kingsley Wood, in his report on the recent typhoid inquiry at Croydon, advocated and encouraged the development of a Consultative Advisory Committee to assist and advise the medical officer of health. The Consultative Advisory Committee would contain no lay members, and its proceedings would be confidential. Its chairman would be the medical officer of health, who, it must be remembered, has to bear the full responsibility for the health of his district. He should have the last word in its decisions. Such a committee should be of great help and support to the medical officer of health in his responsible and arduous duties.

It must be remembered that when special expert help and advice is required the medical officer of health can consult the Ministry of Health, from whom immediate assistance is always forthcoming, as in the recent Bournemouth and Croydon typhoid outbreaks. It must also be remembered that the medical officer of health can, and does, call in the medical practitioners concerned when any occasion arises such as the occurrence of any unusual case or cases of infectious disease.

The General Practitioner's Part

The general practitioner must play a great part in the developments that have taken place. The municipal authorities are desirous of doing all they can to advance the health services in every branch of medicine and surgery in their districts, and general practitioners should be brought into co-operation as much as possible. At the post-natal centre, the child welfare centre, the immunization centre, for example, there are many opportunities for them to be of enormous help. It is important that those practising in the district, whether consultants or general

practitioners, should equip themselves for these responsibilities by special study of the particular branch—child welfare, immunization, orthopaedics, or whatever it is—in which they wish to be of service. Every member of the public should have a doctor of his own choice. With the many health services available the public is becoming bewildered, but if each person has the doctor of his choice he can consult with and confide in him and obtain the best health guidance, and can also find out how the many organized facilities can best be made available for his particular need.

For those who wish to assist in these public health services there are special diplomas, such as the diploma of child health, the diploma of psychological medicine, and the diploma of Master of Midwifery of the Society of Apothecaries. These and other special diplomas have been instituted in order to bring about this co-operation and help between the practitioners and the public health services.

The medical man who undertakes to assist the municipal authorities in the provision of health services must place those duties first. Co-operation, punctuality, and efficiency of service are of paramount importance, and private practice should take second place to public duties.

Hospital Services

These up to a few years ago comprised Poor Law hospitals or infirmaries and voluntary hospitals, with a few municipal hospitals. They were run without any spirit of co-operation.

In 1929 the Local Government Act was passed, producing an enormous change in the relations of the hospital services. It placed the Poor Law infirmaries under the London County Council in London and under the municipal authorities in the country. It is rather interesting that in this Act—a huge Act filling a considerable volume—one of the shortest sections (Section 13), which is only seven lines in length, has brought about the greatest change for many years in the hospital services of this country. The section reads as follows:

> "The council of every county and county borough shall when making provision for hospital accommodation and discharge of the functions transferred to them under this part of this Act consult such committee or other body which they consider to represent those governing bodies and the medical and surgical staffs of the voluntary hospitals providing services in or for the benefit of the county or county borough as to the accommodation to be provided and as to the purposes for which it is used."

That is a very mild section. All it says is that the public health authorities shall consult with the representatives, lay and medical, of the voluntary hospitals when any development in hospital construction is to be made.

In this country the State does not lead, but it points the way. That is, indeed, why our Empire has been so great and successful and its affairs on the whole have run so smoothly. The section I have quoted really points the way to further developments.

In London, soon after the Act of 1929 was passed, the Voluntary Hospitals Committee was inaugurated to serve as a liaison between the voluntary hospitals and the hospitals of the County Council. The committee consists of medical and lay members in equal numbers, and under the chairmanship of Mr. O. N. Chadwyck-Healey and the honorary secretaryship of Professor L. S. Dudgeon it has done wonderful work. In every possible way it has encouraged co-operation between the voluntary hospitals on the one hand and the County Council and municipal authorities on the other.

The lead given in London has been followed in Manchester by the establishment in October, 1935, of a "Joint Hospitals Advisory Board," which consists of ten members of the Public Health Committee, together with the medical officer of health of the city of Manchester, eight representatives of the Voluntary Hospital Council, five representatives of the University of Manchester, and one representative of the Manchester Division of the British Medical Association. This Joint Advisory Board, which, it will be noted, properly consists of lay as well as medical members, is doing admirable work in the furthering of true co-operation between the hospitals.

In Liverpool the "Liverpool Hospitals Joint Advisory Committee" was formed in November, 1936. It consists of six members of the Port Sanitary and Hospitals Committee, together with the medical officer of health of the council of the city of Liverpool, six members chosen by the Associated Voluntary Hospitals Board, and three representatives of the University of Liverpool. This joint committee is doing valuable work in bringing about co-operation between the municipal and voluntary hospitals.

The Act of 1929, which led the way to co-operation between the voluntary and municipal hospitals, placed the Poor Law infirmaries, which had previously constituted the bulk of the hospitals in this country, under the county councils and municipal authorities. This has had the result of putting these hospitals in a much better position, since they now have no trouble about finance; everything is done which is considered desirable in the best interests of the health of the community, and they are being developed and advanced in every direction, including the provision of consultation and specialist services. It must be remembered that the voluntary hospitals have for many years not only played a great part in the hospital service of the country but have led the way in medical and nursing education and in research. They are now helping the municipal hospitals by providing the consultant staff for those institutions.

Conclusion

In conclusion, it may be said that great efforts are being made to bring about co-operation between the medical profession and the public, but much more is required.

With regard to hospitals, everything possible should be done to close the gulf which has existed in the past between the municipal and the voluntary hospitals. These should not be competitive, but should, in a true spirit of co-operation, supplement one another's work. The representation of municipal hospitals on the committees of the voluntary hospitals, and vice versa, would be a step in the right direction.

With regard to the many newly developed health services it is necessary for the medical profession to play its part. Public service of the highest efficiency is required, and this must take precedence of private practice.

A word of caution may be uttered. The keenness and enthusiasm of the public for new health services (for which, indeed, the medical profession is responsible) is admirable and praiseworthy. These services have now advanced to such a degree that the ordinary layman is somewhat bewildered and unable to realize what is provided. Any further proposals should be carefully scrutinized and considered before their adoption. Let full use and understanding be made of what is already provided.

THE LABORATORY AND THE NATIONAL HEALTH INSURANCE SERVICE*

BY

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This year marks the end of a quarter of a century since the Government recognized in the passing of the National Health Insurance Act that not only sanitation and the prevention of disease but also the medical care of the individual in sickness was the concern of the State. The National Health Insurance Acts have now become an integral part of the life of the community, and it is difficult for most members of the profession now practising in this country to imagine the state of affairs before they came into force. No one denies that on the whole the service works well and has done much towards preserving the national health. The Acts were designed to place at the disposal of those coming within their scope the best in the way of medical attention that was available. They no doubt accomplished this at the time, but it is open to question whether this is still the case. The Act of 1913 was designed to meet the conditions of medical practice at that time. But medicine is not static, and its general outlook has undergone an outstanding change; it cannot be said that the national health insurance service has adapted itself to the new circumstances. This change in outlook is due to the rise in importance in the last quarter of a century of the laboratory, and of this change the National Health Insurance Acts, even as amended, take no cognisance.

In 1913 the foundations of what may in time develop into the science of medicine had indeed been well and truly laid, but very little in the way of superstructure had been raised upon them. Workers in laboratories—physiological, pathological, and bacteriological—had even by then produced an impressive store of knowledge as to the functioning of the human body in health and disease, the behaviour of the micro-organisms likely to attack it, and of the methods of defence against those organisms and other noxious agents, but the data had not been embodied in the general corpus of medicine. The only effective antiserum in general use at that time was that against the *C. diphtheriae*; the one really specific therapeutic product of the chemical laboratory was "606"; the only effective endocrine product was dried thyroid gland; the therapeutic agents at the disposal of the practitioners first called upon to administer the national health insurance service were for the most part neither specific nor highly expensive.

Achievements in the Laboratory

All this is now altered. There are to-day specific, highly effective, and at the same time highly expensive remedies of great potency for many conditions which our predecessors were obliged to treat symptomatically or as best they could. These remedies have for the most part been made available as the result of work carried on in laboratories devoted to various branches of the biological and chemical sciences. For convenience, the departments of these sciences dealing with the functioning of the body in health and disease, with the behaviour of the various agents living and dead capable of influencing that behaviour, and with the reaction of the body to these agents may be grouped under the headings of physiology and pathology, which latter is merely morbid physiology. It is perhaps unfortunate that as practical medical men we are prone to concentrate too much upon the morbid and to consider all the accumulated and still accumulating knowledge under this head as a matter of "pathology."

Whatever the name given to this department of knowledge the effect of its impact upon the practice of medicine in general has been enormous. Whether medicine be a science or whether it can ever be practised as such is beside the point. What is of importance is that within the last quarter of a century work mainly carried on in laboratories has served to throw a flood of light upon the behaviour of the body in health and disease. Much that was obscure, much indeed that was unthought of twenty-five years ago, is to-day a commonplace of the teaching of the medical schools. In acquiring this new knowledge the laboratories have placed at the disposal of the practitioner in many cases the means of diagnosing the particular nature of the breakdown of normal function and the means of combating it.

For accurate treatment and prognosis correct diagnosis is essential; in many conditions—for instance, in renal disease—the laboratory has made available an accuracy of diagnosis and prognosis impossible on clinical observation alone. In treatment, so long as it remains purely symptomatic, accurate diagnosis is not of great moment. When, however, specific remedies—and many of them are highly specific—are available the case is far different, and accurate diagnosis becomes of the first importance. In rectifying particular departures from the normal they are sovereign; for all others useless and perhaps even harmful. These remedies have been made available as a result of the work of the laboratories; in the diagnosis of the particular conditions in which they will be of help the aid of the laboratory is essential; in the use of many of them the effective dosage can only be ascertained by the use of laboratory methods. The National Health Insurance Acts take no cognisance of any of these facts so well known to all those engaged in the practice of medicine. They make provision, regardless of expense, for any drug, remedy, or therapeutic agent which the practitioner may prescribe (and many of these highly specific agents are extremely expensive), but they do not provide the practitioner with that assistance whereby he can ascertain whether the agent he is prescribing is really what is required and also follow the response to his treatment.

Where Money is Wasted

Pernicious anaemia affords an outstanding example of the importance of laboratory aid both in diagnosis and in the control of treatment. Until about ten years ago the establishment of this diagnosis meant the signing of the patient's death warrant; the disease was invariably fatal. The diagnosis of pernicious anaemia is more frequently made in the absence of the condition and more frequently missed in its presence than any other of which I have knowledge. In the anti-anaemic principle of liver the laboratory has now provided the means of treating this hitherto incurable condition successfully. The anti-anaemic principle, however, is highly specific; for almost all other types of anaemia it is useless. It is essential that the practitioner, before starting to use it, should be sure that the anaemia he is treating is pernicious anaemia and no other type; otherwise he may be wasting an expensive drug, and, moreover, can have no certainty that any improvement following his treatment is to be ascribed to it. Furthermore, the dose of the anti-anaemic principle required to keep the blood picture normal and to maintain a state of good health differs from patient to patient. In establishing both the diagnosis and the dosage of the drug the aid of the laboratory is essential, but no provision for such aid is made under the National Health Insurance Acts.

The absence of this provision is undoubtedly responsible for much waste of money, of material health, and probably, in some cases, of life itself. Some five years ago I ascertained that the annual expenditure under the national health insurance service on liver preparation was about £60,000. Probably this amount has greatly increased since then. I know from my own experience that a large part of the preparations thus prescribed are wasted through wrong diagnosis, and, further, that on

* Read before a meeting of the South Staffs Division of the B.M.A.

account of insufficient dosage much is not being effectively used. Quite recently I saw an insured person who for eight years had been treated with liver as suffering from pernicious anaemia; actually the anaemia was of the haemolytic type associated with increased corpuscular fragility, and irresponsive to liver. In the absence of facilities for laboratory diagnosis the patient's doctor had been deceived by the relapses and remissions usual in this condition. He calculated that in the course of the treatment the patient must have received, quite uselessly, about £200 worth of liver extracts from the national health insurance service. Without a laboratory service such errors are inevitable; given such a service there could be little excuse for them.

The Laboratory in the Control of Treatment

The discovery of insulin is the best example of the success of the scientific method of approach in medicine. It has made possible the treatment of diabetes with a success undreamed of twenty years ago. Actually there is no reason now why any diabetic should suffer in health on account of his condition or live less long than his neighbour rejoicing in a healthy glycogenesis. The diagnosis is not difficult, but the establishment of the insulin dosage required in the first instance to bring the diabetes under control and later to maintain good health can hardly, except in the mildest cases, be carried out without the aid of the laboratory. The introduction of the slow-acting insulins has done much to alleviate the lot of the sufferer from the more severe type of diabetes, but their effective use in such cases is impossible without knowledge of the diurnal variations of the blood sugar.

In the various sulphanilamide preparations the chemical laboratory has placed in the hands of the practitioner a weapon against one of the most dreaded of all infective agents—the haemolytic streptococcus. This remedy, however, though specific against the haemolytic streptococci, is without effect on the non-haemolytic. It is a drug not altogether free from toxicity, and before employing it the practitioner requires to know whether or not it is likely to be of avail. The differential diagnosis on clinical grounds alone between infection by a haemolytic streptococcus, a non-haemolytic streptococcus, and a staphylococcus may be difficult or even impossible. By the aid of the laboratory it can be made quickly and with certainty, and definite indications for or against the employment of this most powerful drug obtained. The National Health Insurance Acts make no provision for the necessary examinations.

In the employment of therapeutic immune sera accurate diagnosis is of first importance. On many occasions I have seen many pounds' worth of anti-streptococcal serum uselessly administered to patients suffering from a staphylococcal infection, all because the aid of the laboratory had not been sought. If unnecessary waste of a highly expensive agent is to be avoided in the serum treatment of pneumonia knowledge of the type of the infective pneumococcus is essential. Laboratory methods play so great a part in modern medical practice that instruction in their use and application inevitably figures largely in the teaching of the medical student. In the postgraduate courses now being arranged for panel practitioners it plays as large or perhaps even a larger part. Yet in practice no facilities are offered by the national health insurance service to its doctors to put into effect any of their knowledge.

Realizing the way in which their practice is cramped by lack of laboratory aid, panel practitioners are, when possible, sending the difficult and obscure cases to the nearest voluntary hospital possessing an efficient laboratory service for diagnosis or control of treatment. This arrangement, though better than nothing, is manifestly only a half measure, and inequitable at that. It is a half measure in that it makes provision only for those who can attend as out-patients or be admitted to hospital. It is inequitable in that it throws upon the voluntary hospitals work which is properly a part of the national health insurance service and involves them in expense which ought to be borne by that service. For the benefit of patients not attending hospital the laboratories of many voluntary hospitals throughout the country under arrangements made by the B.M.A. undertake work for insured patients at specially reduced fees. Little use is made of these facilities. The doctor can hardly be expected to pay, and the patient, having made his contributions to the service, sees no reason why he should be mulcted in further payment for what is an essential part of it. The logic of the view is incontestable. To get over this difficulty the insurance committees in certain areas, by taking advantage of loopholes in the Acts, have made arrangements with the local voluntary hospitals for the examination of specimens, the fees being paid from funds accumulated by the committee concerned.

That so many and various attempts have been made to provide laboratory services for the insured person is evidence of the sense of need of such services. Their existence and partial success have had the effect to some extent of dulling the acute edge of that sense and thereby delaying action. It is manifestly absurd that a function so important to the proper working of the health insurance system should depend upon the charity of the voluntary hospitals or loopholes in the Acts. On all sides it is admitted that so long as facilities for laboratory investigation remain outside the scope of its benefit the national health insurance service is partially and not fully efficient. This feeling has been strongly voiced on many occasions and by various interested bodies; it found expression at the Conference of Insurance Committees in London last October, when a resolution was strongly supported and unanimously carried to the effect that pathological facilities should now be available for insured persons.

How Pathological Facilities could be Provided

It is often assumed that to establish a laboratory service in connexion with health insurance would add greatly to its cost. This objection has come largely from Government officials, to whom a new service under the Acts naturally means the building of a lot of new laboratories and the appointment of a numerous staff—medical, technical, and clerical. No such expenditure on buildings or personnel would in actual fact be necessary, nor need the establishment of laboratory facilities entail any appreciable addition to Whitehall. The voluntary hospitals throughout the country through their pathological departments could provide such a service; they already do the work and all they require is recognition and, above all, remuneration.

The whole of England and Wales is now covered by a close network of voluntary general hospitals, each with its own pathological department; roads and means of communication have within the last ten years improved to such an extent that every part of the country is within easy reach of such a hospital and the facilities it offers. In the laboratories of these hospitals the clinical pathological work for panel patients is being carried out free of charge to the health insurance service. This work is an essential part of medical practice under the Acts; it is necessary to the proper functioning of the insurance service, and that the voluntary hospitals should bear the weight of it without remuneration is on the face of it unfair. The voluntary hospitals are maintained partly by charitable bequests, partly by free contributions. There is no good reason why funds from these sources should be used to make up the deficiencies of a State service. The pathological departments of the voluntary hospitals could readily undertake and efficiently perform all laboratory work necessary for the proper functioning of the health insurance service. For various reasons they are the obvious centres in which it should be performed. For one thing they have borne the burden of this work in the past without reward, and it is only just and right that when and if it becomes remunerable they should benefit.

But even more important is the fact that it is in these laboratories that the work can most efficiently be performed. Clinical pathology or the application of laboratory methods to diagnosis and the control of treatment can only be properly carried out in a department and at the hands of those in close and continuing touch with clinical medicine. The impression exists—until lately has even been gaining ground—that the beginning and end of clinical pathology is the examination in a laboratory of a specimen from the patient without reference to that patient. The pathologist was, and still sometimes is, regarded as a sort of mumbo-jumbo who from within his laboratory shrine will, on receipt of appropriate offering of blood, excrement, or tissue, make oracular utterance. But clinical pathology is a department of clinical medicine, and the assumption that it or any other branch of medicine can properly be carried out apart from clinical work is on the face of it absurd. It is an expression of the mechanistic outlook which regards the individual as a machine rather than as a sentient living creature. On the application of this philosophy in politics or economics opinions may differ—but it can have no place in medicine. No proper clinical pathological service can be built up on these lines. Knowledge of the correct application of laboratory methods to clinical medicine and the ability to make correct interpretation of the results can only be attained through long experience in the close co-ordination of laboratory and clinical findings.

The constitution of the pathological laboratories of the voluntary general hospitals as centres in a paid laboratory service under the National Health Insurance Acts would provide them with a sorely needed income. Such an increase of income would most certainly bring about an improvement in efficiency, which in turn would, I believe, do much to help the work of the voluntary hospitals. No one will, I think, deny that with the efficiency of the voluntary hospitals is bound up the efficiency of medical practice throughout the whole country.

THE DISTRIBUTION OF CANCER
WITH SPECIAL REFERENCE TO THE METROPOLITAN BOROUGH OF ISLINGTON

BY

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AND

H. A. BATHURST, B.A.

Local variations in the incidence of cancer have always been and still remain a matter of controversial opinion. The question is of obvious importance as having some bearing on the infective theory of cancer. The subject, however, appears to have received little scientific attention in recent years in this country, with the exception of a paper by P. Stocks (1935), in which a number of references to the French literature on "cancer houses" may be found.

Previous Investigations

Leeson (1908) investigated the cancer deaths, numbering 248, which had occurred at Twickenham over a period of twenty-one years, and showed that all but four were found in separate houses. L. Sambon (1926), as the result of investigations in Italy, Holland, and other countries, vigorously supported the existence of "cancer houses," and from this hypothesis formulated a parasitic theory of cancer, implicating certain helminths. His results, however, do not seem to admit of statistical analysis, and were criticized by Leiper (1926) from the zoological aspect.

P. Stocks (1935) analysed 2,895 cancer deaths at Bristol and 694 deaths at Worcester, and concluded that the distribution of cancer in these districts was a purely random one, taking into account the tendency of persons of cancer age to be grouped in certain houses or districts. More recently Leyton and Leyton (1937) have investigated the regional distribution of cancer in the Oxford area, and conclude from the grouping of cases that this does not follow the laws of chance, but they give no detailed calculation in support of this opinion.

The Present Investigation

This comprises the deaths from cancer occurring in the metropolitan borough of Islington during the years 1932–6 inclusive. Islington is the second largest London borough, with an estimated population of 310,000 and containing some 45,000 inhabited houses. The population is predominantly of the "insured" class. The total cancer deaths during the five years numbered 2,663, but as it was desired to consider only those cases where cancer had arisen at the address shown in the death returns those patients dying in mental hospitals and "the institution" were excluded. This leaves 2,464 cases in which it may fairly be assumed that the disease arose or existed at the address given, the patients dying in their homes or in hospitals for acute diseases in the vicinity.

Tables were constructed for the whole of Islington, street by street, comprising about 1,000 streets, terraces, blocks of flats, and mews, and the exact address of each case was noted. For reasons of space it is impossible to reproduce these tables. The summarized results are as follows:

1 cancer case in a house	2,322 houses
2 cancer cases in a house	68 "
3 " " " "	2 "

From the data already given it is possible to calculate the expected distribution of cases, supposing they were to follow a chance distribution, using the formula:

$M_nC_rp^rq^{n-r}$, where M denotes the number of inhabited houses (45,000) and n the number of cancer deaths (2,464), $p = \frac{1}{M}$ and $q = 1 - \frac{1}{M}$.

If r has the values 0, 1, 2, 3 in succession, the formula gives the number of houses in which 0, 1, 2, 3 deaths, respectively, may be expected to occur.

It seems that this formula was first applied to the distribution of diseases by Karl Pearson (1911). Its application to the spread of cancer is at first sight open to the following objections:

1. The probability that a case will occur is not constant, but varies from house to house according to the number of occupants who are of "cancer age."

2. Multiple cases cannot occur except in houses where two or more people are of "cancer age."

3. When one death has occurred in a house the probability of a second case in a house will in general be reduced owing to the reduction of the number of persons at risk in the house.

Closer mathematical investigation, however, shows that when these three factors are taken into account the formula still gives a very close approximation to the distribution which is to be expected on the hypothesis of chance.

Comparison of Observed and Expected Results

The observed results and expected results show the following comparison:

Observed Distribution		Calculated Distribution if due to Chance	
1 in a house ..	2,322 houses	1 in a house ..	2,333 houses
2 " "	68 "	2 " "	64 "
3 " "	2 "	3 " "	1.16 "

It must be admitted that these figures reveal a striking similarity, and leave no doubt that the house-to-house distribution of cancer in Islington is of a chance nature.

It is interesting to compare the above figures with the results given by the application of the same method to the deaths from cancer which occurred a few years earlier in the two boroughs investigated by P. Stocks.

Observed Distribution

	Islington	Bristol	Worcester	Totals
Houses with 0 case	42,608	69,648	10,879	123,135
" " 1 "	2,322	2,757	658	5,737
" " 2 cases	68	64	18	150
" " 3 or more ..	2	3	0	5

Calculated Distribution

Houses with 0 case	42,602.22	69,634.04	10,880.82	123,117.08
" " 1 "	2,332.76	2,781.68	654.45	5,768.89
" " 2 cases	63.84	55.54	19.63	139.01
" " 3 or more ..	1.18	0.75	0.10	2.03

The number of houses having three or more cases is so small that the excess of the observed over the expected number cannot be regarded as significant. However, in the case of Bristol, as we have already noted, this excess can be fully explained by the segregation in certain streets of a number of persons whose ages range from 55 to 75. When we bear in mind that these tables relate to 129,000 inhabited houses it can scarcely be disputed that the incidence of the disease is in accordance with the laws of chance. If there were any appreciable tendency for the disease to spread from one person to another in the same house or to people in adjacent houses a very considerable increase in the number of multiple cases would be expected. The figures for Islington relate to a considerable area of the Administrative County of London, which has similar environmental circumstances to, and merges imperceptibly into, the remainder of London. It therefore seems not unfair to assume that what holds good for this borough will probably hold good for the remainder of London, and not improbably for other areas.

Reverting to the paper by Leyton and Leyton (1937) the authors dealt with a mixed urban and rural area, the latter of which cannot be compared with a metropolitan borough, where the environment is comparatively standardized. In the rural area there are possibly variations in water supply, drainage, and other factors in the various areas. But if we consider the figures given for the city of Oxford, 123 only in number, it seems fair to suggest that in the light of the results obtained at Islington and elsewhere no definite conclusions can be drawn from such a comparatively small series of cases; moreover, it is a mistake to assume that a chance distribution is an *even* distribution unless a very large number of cases are considered. To illustrate this point the following calculation has been made. Suppose a population of 310,000 to be divided at random into 775 equal groups each containing 400 people. Then, by using the same formula as before, we find that the expected distribution of 2,464 deaths from cancer would be that given in the table below:

No. of groups with 0 case ..	32.2	No. of groups with 7 cases ..	20.9
" " " 1 " ..	102.5	" " " 8 " ..	8.3
" " " 2 cases ..	163.0	" " " 9 " ..	2.9
" " " 3 " ..	172.9	" " " 10 " ..	0.93
" " " 4 " ..	137.4	" " " 11 " ..	0.27
" " " 5 " ..	87.3	" " " 12 " ..	0.07
" " " 6 " ..	46.3		

Each group might represent the inhabitants of a particular neighbourhood. The table shows that even if the groups are taken at random the number of cases in a group may vary from 0 to 10 or perhaps more, while *selected* groups of 400 might always be found which contain a much greater number. We give these figures in illustration of the fact that a certain tendency to form groups is characteristic of a chance distribution, and to show that in consequence of this the greatest caution is necessary in attempting to draw conclusions from such a tendency when it is observed.

Summary

1. The house-to-house distribution of 2,464 cases of cancer occurring in Islington during the years 1932–6 has been analysed.

2. It is shown that this distribution corresponds very closely with the expected distribution calculated according to the laws of chance, the criterion being the number of houses in which multiple cases occur.

3. This correspondence is no less striking when the Islington figures are combined with those obtained (by P. Stocks) at Bristol in the years 1922–7 and at Worcester in the years 1921–30.

4. It is argued that theories based on the grouping of cases in particular areas are often misleading.

5. It is suggested that the distribution of cancer in general follows the laws of chance so closely that it is superfluous to introduce any other hypothesis to account for it.

6. These facts are some evidence against an infective or contagious theory of cancer spread, and invalidate any remaining belief in "cancer houses."

We desire to express our gratitude to Dr. J. Clark Trotter, medical officer of health for the Metropolitan Borough of Islington, for access to the death returns, and to the librarian of the British Medical Association for assistance with the references.

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Diary of Central Meetings

SEPTEMBER

9 Fri. Public Medical Services Subcommittee, 2.15 p.m.
22 Thurs. Insurance Acts Committee, 11.30 a.m.

Branch and Division Meetings to be Held

METROPOLITAN COUNTIES BRANCH: WESTMINSTER AND HOLBORN DIVISION.—At Council Chamber, Westminster City Hall, Charing Cross Road, W.C., Thursday, September 8, 8 p.m. Lecture on air raid precautions.

Important Notice concerning Appointments

The attention of medical practitioners is drawn to the important notice concerning appointments which is published each week in the advertisement columns of the *Journal*. This notice asks practitioners to communicate with the Secretary of the British Medical Association before applying for any of the appointments listed therein. It appears this week at page 77.

No. 33.

INFECTIOUS DISEASES AND VITAL STATISTICS

We print below a summary of Infectious Diseases and Vital Statistics in the British Isles during the week ended August 20, 1938.

Figures of Principal Notifiable Diseases for the week and those for the corresponding week last year, for: (a) England and Wales (London included). (b) London (administrative county). (c) Scotland. (d) Eire. (e) Northern Ireland. Median values for the last 9 years for (a) and (b).

Figures of Births and Deaths, and of Deaths recorded under each infectious disease, are for: (a) The 126 great towns (124 in 1937) in England and Wales (including London). (b) London (administrative county). (c) The 16 principal towns in Scotland. (d) The 13 principal towns in Eire. (e) The 10 principal towns (9 in 1937) in Northern Ireland.

A dash — denotes no cases; a blank space denotes disease not notifiable or no return available.

Disease	1938					1937 (Corresponding Week)					1929-37 (Median Value Corresponding Weeks)	
	(a)	(b)	(c)	(d)	(e)	(a)	(b)	(c)	(d)	(e)	(a)	(b)
Cerebrospinal fever	24	3	6	1	—	19	3	6	1	1		
Deaths		—	1				1	1				
Diphtheria	961	144	125	63	17	832	97	155	40	23	832	120
Deaths	25	3	—	5	—	23	5	4	1	1		
Dysentery	29	5	34		—	20	4	18		—		
Deaths				—	—				—	—		
Encephalitis lethargica, acute	4	1	1		—	2	—	—		—		
Deaths		—					—					
Enteric (typhoid and paratyphoid) fever	34	4	8	7	2	52	5	8	16	1	57	
Deaths	—	—	—	—	—	1	—	—	—	—		
Erysipelas			48	3	3			56	5	2		
Deaths		—					—					
Infective enteritis or diarrhoea under 2 years												
Deaths	51	16	4	3	9	53	14	13	18	6		
Measles			42		—			25		—		
Deaths	2	1	2	—	—	5	—	—	1	—		
Ophthalmia neonatorum	124	7	23		—	120	8	39		1		
Deaths												
Pneumonia, influenzal ‡	345	33	6		13	391	29	1		1	417	30
Deaths (from influenza)	8	—	—	—	2	9	2	—	—	—		
Pneumonia, primary			101	1				121	3			
Deaths		10		5	5		9		6	1		
Polio-encephalitis, acute	4	—				3	—					
Deaths		—					—					
Poliomyelitis, acute	77	7	14	4	—	23	2	2		—		
Deaths		—					—					
Puerperal fever	3*	3	17	1	—	40	2	22	6	2		
Deaths		1†					—					
Puerperal pyrexia	151	14	17		1	162	14	18		—		
Deaths												
Relapsing fever	1	—			—	—	—	—		—		
Deaths												
Scarlet fever	1,067	76	254	61	61	1,187	96	267	52	34	1,371	177
Deaths	1	—	—	1	—	3	—	—	—	—		
Small-pox	—	—	—		—	—	—	—		—		
Deaths	—	—		—	—	—	—		—	—		
Typhus fever	—	—	—	—	—	—	—	3	—	—		
Deaths				—	—				—	—		
Whooping-cough			62		15			50		10		
Deaths	7	—	5	2	1	16	8	4	—	—		
Deaths (0-1 year)	284	50	40	15	22	242	52	57	38	8		
Infant mortality rate (per 1,000 live births)	47	41				41	43					
Deaths (excluding stillbirths)	3,643	664	464	165	122	3,433	661	504	177	102		
Annual death rate (per 1,000 persons living)	8.9	8.5	9.5	11.2	10.8	8.5	8.3	10.3	12.1	9.2		
Live births	7,098	1,376	822	324	232	7,045	1,366	904	468	234		
Annual rate per 1,000 persons living	17.4	17.5	16.7	21.9	20.6	17.4	17.2	18.5	31.9	21.1		
Stillbirths	235	31				257	31					
Rate per 1,000 total births (including stillborn)	32	22				35	22					

* After October 1, 1937, puerperal fever was made notifiable only in the administrative county of London.

† Death from puerperal sepsis.

‡ Includes primary form in figures for England and Wales, London (administrative county), and Northern Ireland.

EPIDEMIOLOGICAL NOTES*

Poliomyelitis

There was a slight drop in the number of notifications of acute poliomyelitis in England and Wales—77, compared with 81 in the previous week—but in London the number rose from 3 to 7. In Scotland and Northern Ireland the numbers differed by one case. Notifications of 2 or more cases were received from: Braintree (rural) 3, Braintree (urban) 4, Lexden and Winstree (Essex) 4, Portsmouth 7, Swansea 3. The cases in London were distributed thus: St. Pancras 2, Deptford 1, Greenwich 1, Lewisham 1, St. Marylebone 1, Southwark 1. Reports have come to hand of 8 cases (with 1 death) in the week ended August 27: 5 at Braintree, 1 at Swilly (Devon), 1 in London, and 1 at Romford. Two other deaths were reported.

Typhoid Fever

In England and Wales 34 cases of typhoid fever were notified during the week—an increase of 10 on the previous week—while in London 4 notifications represent an increase of 3. The figures, however, are well below those for the corresponding week last year, and below the median value for the last nine years. Of the 34 cases, in only three towns were more than 1 case notified—namely, London 4 (Lambeth 1, Poplar 1, St. Pancras 1, Wandsworth 1), Farnworth 10, Axminster 2. The 10 cases notified in the week under review at Farnworth belong to the outbreak in which 44 cases have been notified to date with 6 deaths; 6 of the 10 cases came from houses which have been hitherto unaffected. The last 3 cases which were reported on August 23 were probably infected not from the primary source but as a result of contact with other cases or carriers. The source of the outbreak remains untraced. Two further cases have occurred in Axminster at an interval of nine days after the 2 notified in the week under review. Instructions were issued to boil all drinking water and milk until the source of the infection is ascertained.

Cerebrospinal Fever

There is an increase in the number of notifications of cerebrospinal fever in England and Wales during the week, when 24 cases were notified, compared with 14 in the previous week. The cases were widely distributed over England and Wales: in two towns only—London and Liverpool, 3 each—did more than one case occur. A fatal case of cerebrospinal fever—in the wife of a soldier—was reported at Aldershot on August 24.

Diphtheria and Scarlet Fever

Notifications of diphtheria in England and Wales during the week under review rose from 892 to 961: the chief centres in which increases were recorded are: Wokingham 4 (1), Easington 13 (12), Bristol 9 (0), Cheltenham 4 (2), Bolton 14 (6), Liverpool 41 (15), Manchester 23 (18), St. Helens 8 (4), Leigh 12 (5), Leicester 10 (5), Newark 5 (0), Oxford 2 (0), Bath 7 (3), Portsmouth 7 (3), Croydon 4 (1), Bradford 17 (3), Leeds 14 (4), Adwick-le-Street (Yorks) 6 (0). In London there was an increase from 115 to 144 in the week under review—Camberwell 6 (3), Finsbury 2 (0), Fulham 8 (2), Islington 7 (2), Lambeth 17 (11), St. Pancras 19 (8), City of Westminster 5 (1). An increase was recorded in Scotland—125 compared with 113—and in Eire and Northern Ireland, where 63 (43) and 17 (13) cases respectively were reported. Deaths from diphtheria in the 126 Great Towns of England and Wales rose from 21 to 25 and in London from 1 to 3: of the 25 deaths in the 126 Great Towns 3 (0) occurred in Liverpool and 2 each in Bolton (0) and South Shields (2). There was a fall in the notifications of scarlet fever in England and Wales during the week—1,067, compared with 1,129—and in London also—76, as against 107: these figures were well below the median values for the last nine years.

Measles and Whooping-cough

There were 2 deaths (in London and Oxford) from measles in the 126 Great Towns of England and Wales during the week, compared with 1 in the previous week. The average daily admissions to the L.C.C. fever hospitals were 3 (4): in the metropolitan boroughs in which measles is notifiable notifications dropped in nine, remained the same in one, and rose in one—Finsbury 9 (5). In Scotland notifications fell from 49 to 42 in the week under review; of the 42 cases 17 (14) occurred in Kirkcaldy, and 4 each in Dunfermline (12), Orkney (0), and Greenock (5). There were 2 deaths from measles in the 16 principal towns of Scotland—1 each in Greenock and Hamilton. In the 126 Great Towns of England and Wales 7 (1) deaths from whooping-cough were reported—1 each in Manchester, St. Helens, Salford, Sheffield, Exeter, Plymouth, and Rhondda. In Scotland 62 (52) cases of whooping-cough were notified, 47 (41) of which were in Glasgow, and 5 (5) deaths—3 in Glasgow and 1 each in Dundee and Hamilton.

Cholera

During the week ended August 20, 959 cases of cholera and 263 deaths were reported in Shanghai, and in Hong Kong 38 cases with 20 deaths. In British India 9,264 cases with 4,473 deaths were reported in the Central Provinces, 604 cases with 226 deaths in Bombay (Presidency), 493 cases with 237 deaths in the United Provinces, and 93 cases with 49 deaths in the North-West Frontier Province. The epidemic of cholera in the Central Provinces has proved to be more serious than any observed since 1921: the number of deaths recorded (provisional) in this area up to August 20 in 1938 was 25,000; in the whole of 1935, 20,140 deaths were recorded; in 1934, 27,329 deaths; in 1930, 23,250 deaths; and in 1921, 58,351 deaths.

* Except where otherwise mentioned, figures in parentheses refer to the week preceding the one under review.

THE INSURANCE MEDICAL SERVICE WEEK BY WEEK

Medical Benefit for Staffs of Hospitals

A circular letter has been issued by the Ministry of Health to insurance committees drawing attention to representations on this subject submitted to the Department by the Insurance Acts Committee. Some doubts had been expressed by the Insurance Acts Committee as to the sufficiency of the arrangements for the treatment of the resident insured members of the staff of an institution during the insured person's absence from the institution. The Minister, it is stated, would expect to find that it is customary to treat the institution concerned as the medical officer's area of practice, and consequently to regard insured members of the staff as entitled to temporary resident treatment during any period of residence away from the institution. The Minister would accordingly suggest that the area of practice should be so defined in any contracts for service made with medical officers of institutions who join the medical list, and that, where not already so defined in existing contracts, the necessary steps should be taken to amend the contracts in that sense, or, failing that, an opportunity should be taken of reminding the medical officer of his liability for the treatment of insured members of the staff on his list wherever they may be within the ordinary applicable radius of practice within which the institution is situated, and not only within the institution itself.

Upon this point the Medical Benefit Subcommittee of the London Insurance Committee—who have had the circular letter under consideration—report as follows:

> The committee have always taken the view that the medical superintendent of the hospital is not required to visit resident members of the staff when absent from the institution, and no difficulty has ever arisen in this connexion. Having regard, however, to the suggestions contained in the circular letter, it is proposed to inform the resident medical officers of the various hospitals that the area of their practice is to be regarded as the institution itself.

In the second place the Department states that it is understood that the authorities of some institutions in which "collective own arrangements" obtain already undertake liability for reasonable payments in respect of the "temporary resident" treatment of the members of their staffs to whom the arrangements apply, and the committee is urged to take steps to induce the authorities of institutions who have not already done so to follow this

example. The London comment upon this part of the circular letter is as follows:

"With regard to the insured staffs of institutions making 'collective own arrangements,' the only instance of this kind in London now is in the London Hospital. We propose to communicate with the hospital with a view to obtaining a definite undertaking that they will assume responsibility for the reasonable expenses incurred by any of their insured resident staff included under the collective own arrangements system who may require medical treatment when away from the hospital."

Finally, the letter from the Ministry of Health suggests that medical officers of institutions should be required to make a quarterly clearance of their lists, and that failing this the question of a reduction in the remuneration should be considered. The report of the Medical Benefit Subcommittee for London on this matter is as follows:

"With regard to the suggested quarterly clearance of the lists, it is the experience of the committee that, so far from the lists of medical officers of hospitals being inflated, it is almost invariably found that the number of persons credited to the medical officer is less than the number of insured resident staff. There are a number of factors which account for this. Apart from the London County Council hospitals, the resident medical officers, as a rule, change with considerable frequency. It is very difficult to secure that an incoming resident medical officer will at once join the committee's medical list, and it is not infrequently found that such medical officers leave the service of the hospitals, and the first intimation which the committee receive is the return of a cheque by a successor asking that it may be made out in his name. Again, as a rule, the responsibility for securing the surrender of medical cards by nurses and employees of hospitals is delegated to the matron or a house sister, and with but few exceptions this part of their duties is not taken seriously. The labour involved in instituting a quarterly clearance of the small lists of the rather large number of hospitals and similar institutions in London would be considerable and the net result, in all probability, would be negligible. Certainly the effect upon the distribution of the Practitioners' Fund would not be worth considering. With regard to the alternative suggestion that the question of a reduction in the number of units credited to the medical officer for the purpose of the distribution of the Practitioners' Fund might be considered, medical officers of hospitals and similar institutions already suffer a 10 per cent. reduction in their fees by reason of their being relieved of the liability to have insured persons assigned to them. There seems to be no logical reason why their remuneration should be further reduced."

Range of Medical Service

By Clause 10 (2) of the terms of service for insurance practitioners a practitioner is required to notify the committee of any case in which he charges, or contemplates charging, an insured person a fee for any treatment rendered by him which he considers outside the scope of medical benefit and which, owing to his special experience in that particular class of professional work, he is competent to undertake.

During the period 1927 to 1936 the London Insurance Committee received from various practitioners 1,059 notifications of this kind, in 1,017 of which the Local Medical and Panel Committee and the Insurance Committee agreed that the respective services rendered involved the application of special skill and experience of a degree or kind which general practitioners as a class could not reasonably be expected to possess and that the practitioners concerned were possessed of the necessary skill and experience to enable them adequately to carry out such services. This means that the ruling these practitioners sought to obtain—that is, that the services rendered by them were outside the scope of medical benefit—was upheld and the charging of fees in the circumstances was allowed.

In the remaining forty-two cases the two committees agreed that the services did not involve the application of special skill and that consequently they were within the scope of medical benefit.

An analysis of the cases decided not to be within the scope of medical benefit shows that they resolve themselves mainly into three groups as follows: ophthalmic services, 642; ultra-violet ray services, 155; others, 220. With regard to psychotherapy, it is of interest to recall that referees appointed by the Minister of Health in connexion with the question as to whether treatment of insured persons by psychotherapy is within the range of medical service held an inquiry in 1933. The contentions then put forward may be summarized as follows:

(1) On behalf of the local medical committee: (*a*) that the treatment in question involved the application of special skill and experience of a degree or kind which general practitioners as a class cannot reasonably be expected to possess; and (*b*) that the practitioner concerned had had special academic or postgraduate study of a subject which comprised the service rendered and had had actual recent practice in performing the service rendered or services of a similar character.

(2) On behalf of the insurance committee: (*a*) that the treatment in question did not involve the application of such special skill and experience as aforesaid; and (*b*) that the practitioner had not proved the matters alleged in the above paragraph.

The referees, in their report, stated:

"Having considered the evidence submitted to us, we are satisfied that the psychotherapeutical treatment given by the practitioner in the four cases before us involved the application of special skill and experience of a degree or kind which general practitioners as a class cannot reasonably be expected to possess.

"Evidence was adduced before us that the practitioner had studied psychotherapy in many aspects for a long period, had read widely on the subject, had attended two courses of lectures, and had treated about forty patients psychotherapeutically since 1929. Two medical witnesses agreed that the four cases in question were appropriate for psychotherapeutic treatment and had been efficiently treated so far as they were able to judge without seeing the patients concerned. In these circumstances we are satisfied that the practitioner proved what he was contended by the local medical committee to have proved, and brought himself within the appropriate paragraph of the Medical Benefit Regulations.

"Having regard to some of the points which emerged in course of argument before us, we desire to add the following comments. It may be that persons subject to a psychoneurosis are ill fitted to exercise that independent judgment as to whether they shall be treated by their insurance doctor or elsewhere. Experience alone can show whether such persons will in fact be exploited, but if they were it would not alter our opinion that psychotherapy involves the application of special skill.

"The expression 'skill' having regard to its context cannot, in our view, be limited to manual dexterity.

"The improbability at the present time that general practitioners as a class will have the time or opportunity to become competent psychotherapeutists does not preclude the possibility of a particular practitioner having that time and opportunity and showing that he has become competent.

"The required qualification indicated by the words 'special academic or postgraduate study' is not satisfied by proof of attendance at a course of lectures. What will satisfy that requirement must depend upon the subject of the study. Psychotherapy, which deals with mental as distinct from physical phenomena, requires the adaptation of the mind of the student to conceptions more intangible than those of general medical science, and great care must be taken before a practitioner is held to have had 'special study' within the meaning of paragraph 8 (5) (*b*) of the First Schedule, Part I, of the Medical Benefit Regulations."

POSTGRADUATE COURSES FOR INSURANCE PRACTITIONERS

Three vacancies have occurred in connexion with the course at Sheffield University beginning on October 10. The course lasts two weeks and the main conditions of eligibility are that not less than five years have elapsed since the applicant's first registrable qualification, and that he or she has a list of no fewer than 300 insured persons, or 150 if in rural practice. Any insurance practitioner desiring to apply for one of these vacancies should obtain a form of application from the Secretary, Insurance Acts Committee, British Medical Association House, Tavistock Square, London, W.C.1.

POSTGRADUATE COURSES AND LECTURES

SEPTEMBER AND OCTOBER, 1938

The following postgraduate courses and lectures to be held in London during September and October, 1938, have been notified to the British Medical Association. Further particulars may be obtained direct from the hospitals concerned, or, in the case of arrangements made by the Fellowship of Medicine (F.M.), from the Secretary of the Fellowship, 1, Wimpole Street, W.1.

Subject	Date	Place of Meeting	Nature of Instruction
Cancer	Oct. 15 and 16	Royal Cancer Hospital, Fulham Road, S.W.3	F.M. week-end course
Cardiology ..	Oct. 3 to 15	National Hospital for Diseases of the Heart, Westmoreland Street, W.1	All-day course
Heart and Lungs..	Sept. 12 to 30	Royal Chest Hospital, City Road, E.C.1	F.M. advanced course
Chest Diseases ..	Oct. 24 to 29	Brompton Hospital, Brompton, S.W.3	F.M. course
Dermatology ..	Oct. 4 to 27	St. John's Hospital for Diseases of the Skin	Afternoon course
Fevers	Oct. 1 and 2	Park Hospital, Hither Green, S.E.13	F.M. week-end course
Infants' Diseases..	Sept. 19 to 23	The Infants Hospital, Vincent Square, Westminster	F.M. course
Medicine, Surgery, and the Specialties	Oct. 3 to 8	Metropolitan Hospital, Kingsland Road, E.8	F.M. course
Neurology.. ..	Oct. 10 to 29	National Hospital, Queen Square, W.C.1	Commencing course of lectures
Obstetrics.. ..	Oct. 22 and 23	City of London Maternity Hospital, City Road, E.C.1	F.M. week-end course
Ophthalmology ..	Sept. 24 and 25	Royal Westminster Ophthalmic Hospital, Broad Street, Holborn, W.C.2	F.M. week-end course
Physical Medicine	Oct. 29 and 30	St. John Clinic and Institute of Physical Medicine, Ranelagh Road, S.W.1	F.M. week-end course
Plastic Surgery ..	Sept. 14 and 15	Not yet notified	F.M. course
Proctology ..	Sept. 26 to Oct. 1	Gordon Hospital, 126, Vauxhall Bridge Road, S.W.1	F.M. course
Rheumatism and Hydrotherapy	Sept. 16 to 18	Royal Bath Hospital, Harrogate, Yorkshire	F.M. course

In addition to the above courses the following for the higher degrees and diplomas have been arranged:

Subject	Date	Place of Meeting	Degree or Diploma
Clinical Practice and Hospital Administration (L.C.C.)	Commencing Oct. 4	Brook Hospital, Shooter's Hill, Woolwich, S.E.18	D.P.H.
Clinical Course (F.M.)	Sept. 27 to Nov. 1	National Temperance Hospital, Hampstead Road, N.W.1	F.R.C.S. (Final)
Pathological Course (F.M.)	Sept. 29 to Nov. 3	National Temperance Hospital, Hampstead Road, N.W.1	F.R.C.S. (Final)
Physiology (F.M.)	Sept. 2 to Nov. 4	Not notified	F.R.C.S. (Primary)
Clinical and Pathological Course (F.M.)	Sept. 6, 8, 13, 15, 20, 22	National Temperance Hospital, Hampstead Road, N.W.1	M.R.C.P.
Diseases of the Chest (F.M.)	Sept. 6 to 30	Brompton Hospital, Brompton, S.W.3	M.R.C.P.
Chest and Heart	Sept. 12 to 30	Royal Chest Hospital, City Road, E.C.1	M.R.C.P.

POSTGRADUATE NEWS

The Fellowship of Medicine announces that a course in physiology in preparation for the Primary F.R.C.S. is taking place on Mondays, Wednesdays, and Fridays, at 5.30 p.m. The course consists of lecture-demonstrations, and a paper of questions is set each week. A course, especially intended for M.R.C.P. candidates, will take place at the Royal Chest Hospital on Mondays, Wednesdays, and Fridays, from 8 p.m. to 10 p.m., from September 12 to 30. Other courses have been arranged as follows: D.P.M. course in neurology at West End Hospital for Nervous Diseases, thrice weekly, from October 3 to November 25; rheumatism and hydrotherapy at Royal Bath Hospital, Harrogate, September 16, 17, and 18 (morning); ophthalmology at Royal Westminster Ophthalmic Hospital, September 24 and 25; proctology at Gordon Hospital, September 24 to 30; medicine and surgery at Metropolitan Hospital, October 3 to 8; plastic surgery, September 14 and 15; dermatology at St. John's Hospital, October 3 to 31; infectious diseases at Park Hospital, October 1 and 2. Courses are open only to members of the Fellowship of Medicine (1, Wimpole Street, W.1), to whom application should be made.

WEEKLY POSTGRADUATE DIARY

FELLOWSHIP OF MEDICINE AND POSTGRADUATE MEDICAL ASSOCIATION, 1: Wimpole Street, W.—*Physiology Lectures for Primary F.R.C.S.*: Mon., Wed., and Fri., 5.30 p.m. *Brompton Hospital*, S.W.: Tues. and Fri., 5.15 p.m., M.R.C.P. Classes. *National Temperance Hospital*, Hampstead Road, N.W.: Tues. and Thurs., 8 p.m. M.R.C.P. Clinical and Pathological Class.

EDINBURGH POSTGRADUATE LECTURES.—At Edinburgh Royal Infirmary, *Thurs.*, 4.30 p.m., Sir John Fraser, Some Reflections on the Pathology and End-results of Treatment in Carcinoma of the Breast.

VACANCIES

All advertisements should be addressed to the Advertisement Manager and NOT *to the Editor*

RESIDENT POSTS

ACTON HOSPITAL, W.—C.O. (male, unmarried). Salary £150 p.a.

ALBERT DOCK HOSPITAL, E.—(1) Surgical Officer (male). Salary £250 p.a. (2) M.O. (male, unmarried). Salary £110 p.a.

AYR COUNTY HOSPITAL.—H.S. (male). Salary £100 p.a.

BATH: ROYAL UNITED HOSPITAL.—(1) H.P. (2) H.S. Salaries £150 p.a. each.

BEDFORD COUNTY HOSPITAL.—(1) First H.S. (male). Salary £155 p.a. (2) Second H.S. (male, unmarried). Salary £150 p.a.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Surgical Officer. Salary £200 p.a.

BIRMINGHAM UNITED HOSPITAL.—(1) M.O. (2) Surgical Officer. Salaries £175 p.a. each. (3) Three H.P.s. (4) Three H.S.s. Salaries £70 p.a. each. Appointments for New Hospitals Centre at Edgbaston.

BLACKBURN: ROYAL INFIRMARY.—H.P. (male). Salary £175 p.a.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Surgical Officer (male, unmarried). Salary £200 p.a.

BOLTON COUNTY BOROUGH.—A.M.O. (male) for Townleys Hospital, Farnworth, near Bolton. Salary £250 p.a.

BRIGHTON: LADY CHICHESTER HOSPITAL, Hove.—(1) Senior H.P. (2) J.H.P. Females. Salaries £100 p.a. and £75 p.a. respectively.

BROMSGROVE: WORCESTERSHIRE MENTAL HOSPITAL, Barnsley Hall.—Second A.M.O. (male, unmarried). Salary £350-£25-£450 p.a.

BURNLEY: VICTORIA HOSPITAL.—(1) H.P. (2) H.S. Males. Salaries £150 p.a. each.

CANTERBURY: KENT AND CANTERBURY HOSPITAL.—H.S. (male, unmarried). Salary £125 p.a.

CENTRAL LONDON THROAT, NOSE AND EAR HOSPITAL, Gray's Inn Road, W.C.—H.S. (male). Salary £75 p.a.

CHESTER ROYAL INFIRMARY.—Two H.S.s (males). Salaries £150 p.a. each.

CHESTERFIELD AND NORTH DERBYSHIRE ROYAL HOSPITAL.—C.O. and Fracture H.S. (male). Salary £200 p.a.

CITY OF LONDON MATERNITY HOSPITAL, City Road, E.C.—A.M.O. (male). Salary £80 p.a.

DERBY: COUNTY MENTAL HOSPITAL, Mickleover.—A.M.O. (male). Salary £350-£25-£450 p.a.

DREADNOUGHT HOSPITAL, Greenwich, S.E.—(1) Medical Superintendent. (2) H.P. (3) H.S. Males, unmarried. Salaries £250 p.a., £110 p.a., and £110 p.a. respectively.

DUDLEY: GUEST HOSPITAL.—H.S. (male). Salary £150 p.a.

EXETER: ROYAL DEVON AND EXETER HOSPITAL.—(1) Three H.S.s. (2) H.P. Males. Salaries £150 p.a. each.

FINCHLEY MEMORIAL HOSPITAL, Granville Road, N.—M.O. Salary £150 p.a.

GLOUCESTER JOINT BOARD FOR TUBERCULOSIS.—J.A.M.O. (male) for Standish House Sanatorium, Stonehouse. Salary £250 p.a.

GRANTHAM HOSPITAL.—M.O. Salary £250 p.a.

GUILDFORD: ROYAL SURREY COUNTY HOSPITAL.—H.S. (male). Salary £150 p.a.

HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—(1) Two H.P.s. (2) Two H.S.s. Unmarried. Salaries £50 p.a. each.

HULL ROYAL INFIRMARY.—H.S. (male). Salary £150 p.a.

IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—C.O. (male). Salary £144 p.a.

ISLE OF WIGHT: ROYAL ISLE OF WIGHT COUNTY HOSPITAL, Ryde.—(1) Senior H.S. (2) H.P. Salaries £140 p.a. and £130 p.a. respectively. Unmarried.
LIVERPOOL EYE AND EAR INFIRMARY.—(1) Ophthalmic H.S. (2) Aural H.S. Salaries £120 p.a. each.
LONDON COUNTY COUNCIL.—A.M.O. (Grade II) (unmarried) for King George V Sanatorium, near Godalming, Surrey. Salary £250 p.a.
LUTON: BUTE HOSPITAL.—H.S. (male). Salary £150 p.a.
MANCHESTER: ANCOATS HOSPITAL.—(1) M.O. (2) C.O. Salaries £150 p.a. each.
MANCHESTER: CHRISTIE HOSPITAL AND HOLT RADIUM INSTITUTE, Withington.—M.O. Salary £150 p.a.
MANCHESTER: ST. MARY'S HOSPITAL.—(1) Two H.S.s for Whitworth Street West Hospital (Maternity). (2) H.S. for Whitworth Park Hospital (Gynaecological Department). Salaries £50 p.a. each.
MANOR HOUSE HOSPITAL, Golders Green, N.W.—J.M.O. (male, unmarried). Salary £200 p.a.
MIDDLESBROUGH: NORTH RIDING INFIRMARY.—Senior H.S. (male, unmarried). Salary £175 p.a.
NATIONAL TEMPERANCE HOSPITAL, Hampstead Road, N.W.—(1) M.O. (2) C.O. (3) H.S. Males. Salaries £175 p.a., £120 p.a., and £100 p.a. respectively.
NEW ZEALAND: OTAGO HOSPITAL BOARD.—Senior Surgical Officer for the University of Otago and Dunedin Hospital, New Zealand. Salary £500 p.a.
NORTHAMPTON GENERAL HOSPITAL.—(1) H.S. to Ear, Nose, and Throat Department. (2) Anaesthetist. (3) H.S. to Maternity and Gynaecological Department. Males. Salaries £150 p.a. each.
NOTTINGHAM HOSPITAL FOR WOMEN.—H.S. Salary £150 p.a.
OLDHAM COUNTY BOROUGH.—Obstetric Officer for the Municipal Hospital. Salary £350-£25-£450 p.a.
POOLE: CORNELIA AND EAST DORSET HOSPITAL.—Surgical Officer (male, unmarried). Salary £200 p.a.
PORTSMOUTH: ST. JAMES HOSPITAL FOR NERVOUS AND MENTAL DISORDER, Milton.—Locumtenent A.M.O. (male). Salary £7 7s. per week.
PRESTON AND COUNTY OF LANCASTER ROYAL INFIRMARY.—H.S. Salary £150 p.a.
PRESTWICH MENTAL HOSPITAL, near Manchester.—Locumtenent M.O. (male, unmarried). Salary £7 7s. per week.
PRINCESS ELIZABETH OF YORK HOSPITAL FOR CHILDREN, Shadwell, London, E.1.—H.P. Salary £125 p.a.
PRINCESS LOUISE KENSINGTON HOSPITAL FOR CHILDREN, St. Quintin Avenue, North Kensington, W.—H.S. (male). Salary £120-£150 p.a.
QUEEN'S HOSPITAL FOR CHILDREN, Hackney Road, E.—(1) H.P. (2) H.S. for Ear, Nose, and Throat. Salaries £100 p.a. each.
REDHILL: EAST SURREY HOSPITAL.—Senior H.S. Salary £150 p.a.
ROCHDALE INFIRMARY AND DISPENSARY.—Senior H.S. Salary £250 p.a.
ROYAL CANCER HOSPITAL (FREE), Fulham Road, S.W.—M.O. Salary £200 p.a.
ROYAL MASONIC HOSPITAL, Ravenscourt Park, W.—Surgical Officer (male). Salary £250 p.a.
ROYAL NATIONAL ORTHOPAEDIC HOSPITAL, 234, Great Portland Street, W.—Two H.S.s (males, unmarried). Salaries £150 p.a. each.
ROYAL NORTHERN HOSPITAL, Holloway, N.—H.S. Salary £70 p.a.
SCARBOROUGH HOSPITAL, Yorkshire.—(1) H.P. (2) H.S. Salaries £150 p.a. each.
SHEFFIELD: CHILDREN'S HOSPITAL.—H.P. (male, unmarried). Salary £100 p.a.
SOUTHEND-ON-SEA COUNTY BOROUGH.—A.M.O. (Grade 1) (male) for Southend Municipal Hospital, Rochford. Salary £350-£25-£450 p.a.
SOUTHEND-ON-SEA GENERAL HOSPITAL.—(1) M.O. and Medical Registrar. Salary £300 p.a. (2) H.P. (male). Salary £100 p.a.
STOKE-ON-TRENT: NORTH STAFFORDSHIRE ROYAL INFIRMARY.—H.S. Salary £150 p.a.
SURREY COUNTY COUNCIL.—Whole-time Surgeon for Kingston County Hospital, Wolverton Avenue, Kingston-upon-Thames. Salary £600-£25-£700 p.a.
SUTTON AND CHEAM HOSPITAL.—(1) Senior M.O. (2) J.M.O. Males. Salaries £150 p.a. and £100 p.a. respectively.
WARRINGTON INFIRMARY AND DISPENSARY.—Third Resident (male, unmarried). Salary £150 p.a.
WEIR HOSPITAL, Weir Road, Balham, S.W.—Senior M.O. (male, unmarried). Salary £250 p.a.
WEST LONDON HOSPITAL, Hammersmith, W.—(1) H.P. (2) H.S. (3) Anaesthetist. Males. Salaries £100 p.a. each.
WHITEHAVEN AND WEST CUMBERLAND HOSPITAL.—H.S. Salary £150 p.a.
WIGAN: ROYAL ALBERT EDWARD INFIRMARY AND DISPENSARY.—Medical and Surgical Officer and Registrar. Salary £250 p.a.
WILLESDEN BOROUGH.—M.O. for Willesden Municipal (Fever) Hospital. Salary £250 p.a.
WILLESDEN GENERAL HOSPITAL, Harlesden Road, N.W.—C.O. and H.S. (unmarried). Salary £100 p.a.
WINDSOR: KING EDWARD VII HOSPITAL.—H.S. Salary £120 p.a.
WREXHAM AND EAST DENBIGHSHIRE WAR MEMORIAL HOSPITAL.—Two H.S.s. Salaries £150 p.a. each.

NON-RESIDENT POSTS

DORSET COUNTY HOSPITAL.—Hon. Radiologist.
EXETER: PRINCESS ELIZABETH ORTHOPAEDIC HOSPITAL.—Anaesthetist. Honorarium £35 p.a.
GERMAN HOSPITAL, Dalston, E.—Hon. Ophthalmic S.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Part-time Out-patient M.O Salary £150 p.a.
LIVERPOOL HEART HOSPITAL.—(1) Hon. Assistant P. (2) Research Fellow for Institute for the Prevention of Disease (£250 p.a.). These two positions may be held by the same gentleman.
LONDON COUNTY COUNCIL.—Assistant Consulting Dental S. for Public Health Department. Salary £750-£50-£950 p.a.
MANCHESTER CITY.—Assistant Pathologist. Salary £600-£25-£700 p.a.
MANCHESTER ROYAL INFIRMARY.—Part-time Psychiatrist for Medical Neurological Department. Salary £300 p.a.
MILDMAY MISSION HOSPITAL, Austin Street, Bethnal Green, E.—Assistant C.O. (female). Salary £140 p.a.
RICHMOND: ROYAL HOSPITAL.—Hon. Assistant Radiologist (male).
ROYAL NORTHERN HOSPITAL, Holloway, N.—(1) Whole-time Tuberculosis Officer for the Borough of Islington Tuberculosis Dispensary (North). Salary £750 p.a. (2) Medical Registrar. Honorarium £200 p.a.
ST. JOHN'S HOSPITAL, Lewisham, S.E.—Hon. P. (male) in Psychological Medicine.
WEST END HOSPITAL FOR NERVOUS DISEASES, W.—(1) Hon. Assistant Ophthalmic S. (2) Hon. Surgical Assistant.

UNCLASSIFIED

BRENTWOOD: ESSEX COUNTY MENTAL HOSPITAL.—A.M.O. Salary £510-£25-£610 p.a.
BRISTOL CITY AND COUNTY.—Whole-time Assistant M.O.H. Salary £500-£50-£700 p.a.
CHARING CROSS HOSPITAL, W.C.—Medical Registrar (male). Honorarium £150 p.a.
CHESHIRE COUNTY COUNCIL.—Whole-time M.O.H. (male) for Bredbury and Romiley, Hazel Grove and Bramhall, and Marple Urban District Councils and Disley Rural District Council.
CHORLEY BOROUGH.—Whole-time M.O.H. and School M.O. (male). Salary £800 p.a.
DURHAM COUNTY COUNCIL.—Whole-time District Tuberculosis M.O. (male). Salary £500-£25-£700 p.a.
EDINBURGH: ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—Conservator of the Museum and Director of Postgraduate Studies, tenable for five years. Salary £1,000 p.a.
GLASGOW UNIVERSITY.—Barclay Lectureship in Surgery and Orthopaedics in Relation to Infancy and Childhood tenable at Royal Hospital for Sick Children, Glasgow. Salary £700 p.a.
HOSPITAL FOR SICK CHILDREN, Great Ormond Street, W.C.—Three Out-patient Surgical Assistants. Honoraria £50 p.a. each.
IPSWICH: EAST SUFFOLK AND IPSWICH HOSPITAL.—Whole-time Assistant Pathologist (female). Salary £450 p.a.
JOHANNESBURG: UNIVERSITY OF THE WITWATERSRAND.—Professor of Obstetrics and Gynaecology. Salary £1,000-£50-£1,100 p.a.
LIVERPOOL: ROYAL LIVERPOOL CHILDREN'S HOSPITAL.—(1) Surgical Registrar. (2) Medical Registrar. Salaries £150 p.a. each.
LONDON CHEST HOSPITAL, Victoria Park, E.—Laryngologist.
LONDON COUNTY COUNCIL.—A.M.O.s for mental health services. Salaries £470-£25-£570 p.a.
MINISTRY OF HEALTH.—Six Whole-time M.O.s. Salaries £850-£30-£1,200 p.a. each.
PORTSMOUTH CITY.—Tuberculosis Officer and Senior Assistant M.O.H. Salary £750-£937 10s. p.a.
SOUTH AFRICA, UNION OF.—(1) Senior Professional Officer (Physiology). (2) Senior Professional Officer (Biochemistry). Salaries £700-£25-£800 p.a. each.
SOUTHERN RHODESIA MEDICAL SERVICE.—Government M.O. (male, unmarried). Salary £600-£25-£750 p.a.
WARWICKSHIRE AND COVENTRY JOINT COMMITTEE FOR TUBERCULOSIS.—Whole-time Assistant Tuberculosis Officer. Salary £600-£50-£700 p.a.
WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Whole-time "Wander" Scholar (Clinical Pathologist and Registrar to the Children's Department). Salary £250 p.a.

To ensure notice in this column advertisements must be received not later than the first post on Tuesday mornings.

Notifications of offices vacant in universities, medical colleges, and of vacant resident and other appointments at hospitals, will be found at pages 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, and 80 of our advertisement columns, and advertisements as to partnerships, assistantships, and locumtenencies at pages 78 and 79.

APPOINTMENTS

OGILVIE, T. ALEXANDER, M.B., Ch.B., F.R.C.S.Ed., Honorary Assistant Surgeon, Essex County Hospital, Colchester.

LONDON COUNTY COUNCIL.—The following appointments have been made at the hospitals indicated in parentheses. *Assistant Medical Officers (Grade I):* J. J. McCann, M.B., B.S. (Hackney); H. F. P. Grafton, M.D. (St. George-in-the-East); B. Gottlieb, M.D. (Highgate); H. K. Vernon, F.R.C.S. (Mile End); L. J. Wolfson, M.R.C.S., L.R.C.P. (Lewisham). *Assistant Medical Officers (Grade II):* R. G. Park, M.B., Ch.B. (St. Charles's); T. A. Cockburn, M.D. (St. Pancras).